VPDES PERMIT FACT SHEET

This document gives pertinent information concerning the reissuance of the VPDES permit listed below. This permit is being processed as a Minor, Industrial permit. The effluent limitations contained in this permit will maintain the Water Quality Standards (WQS) of 9 VAC 25-260. The proposed discharge will result from the operation of a concentrated, aquatic animal (trout) production facility (SIC Code: 0273 – Animal Aquaculture). This permit action consists of reissuing the permit with revisions to the permit, as needed, due to changes in applicable laws, guidance, and available technical information.

1. Facility Name and Address:
   Montebello Fish Cultural Station
   4010 West Broad Street
   Richmond, VA 23230-1104
   Location: 359 Fish Hatchery Lane, Montebello, VA 24464

2. Permit No. VA0091243; Expiration Date: December 31, 2012

3. Owner: Virginia Department of Game and Inland Fisheries
   Contact Name: Thom Teears
   Title: Superintendent
   Telephone No: 540.377.2418

4. Description of Treatment Works Treating Domestic Sewage: Appendix A
   Total Number of Outfalls – 2

5. Application Complete Date: June 12, 2012

   Permit Writer: Eric Millard Date: September 6, 2012
   Reviewed By: Dawn Jeffries Date: September 7, 2012

   Public Comment Period: October 18, 2012 to November 17, 2012

6. Receiving Stream Name: Mill Creek
   River Mile: Outfall 002: 0.17; Outfall 003: 0.18
   Use Impairment: No
   Special Standards: None
   Tidal Waters: No
   Watershed Name: VAV-H09R Upper Tye River
   Basin: James (Upper); Subbasin: N/A
   Section: 11; Class: VI

7. Operator License Requirements per 9 VAC 25-31-200.C: None

8. Reliability Class per 9 VAC 25-790: N/A

9. Permit Characterization:
   ☐ Private ☐ Federal ☑ State ☐ POTW ☐ PVOTW
   ☐ Possible Interstate Effect ☐ Interim Limits in Other Document (attach copy of CSO)

10. Discharge Location Description and Receiving Waters Information: Appendix B

11. Antidegradation (AD) Review & Comments per 9 VAC 25-260-30:
    Tier Designation: Tier 2
    The State Water Control Board's WQS include an AD policy. All state surface waters are provided one of three levels of AD protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 waters have water quality that is better than the WQS. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 waters are exceptional waters and are so designated by regulatory amendment. The AD policy prohibits new or expanded discharges into exceptional waters.

    The AD review begins with a Tier determination. Mill Creek in the immediate vicinity of Outfalls 002 and 003 is determined to be a Tier 2 water because there are no available data indicating WQS are being violated or just barely met in Mill Creek. AD restrictions apply to Mill Creek, however, due to the wastewater quality of this discharge, the permit does not require or contain any WQS parameter limits based on any AD baselines.

12. Site Inspection: Performed by Bill Maddox on November 18, 2010

13. Effluent Screening and Effluent Limitations: Appendix C

14. Whole Effluent Toxicity (WET) Program Requirements per 9 VAC 25-31-220.D: N/A

15. Solids utilization and disposal options include the land application of dewatered solids to private and state-owned fields (addressed in Solids Management Plan (SMP)).

16. Bases for Special Conditions: Appendix D

17. Material Storage per 9 VAC 25-31-280.B.2: This permit requires that the facility's O&M Manual include information to address the management of wastes, fluids, and pollutants which may be present at the facility, to avoid unauthorized discharge of such materials.

18. Antibacksliding Review per 9 VAC 25-31-220.L: This permit complies with the antibacksliding provisions of the VPDES Permit Regulation.

19. Impaired Use Status Evaluation per 9 VAC 25-31-220.D: Mill Creek in the vicinity of the discharge is not listed in the current 303(d) list of impaired waters.

    A TMDL was developed for the discharge to Montebello Spring Branch in 2002. The TMDL established a WLA of 37 pounds of organic solids per year for this facility discharging to Montebello Spring Branch via Outfall 001. A permit modification in 2003 included two new outfalls (002 and 003) to discharge to Mill Creek. Mill Creek is not listed on the current 303(d) list of impaired waters, and there are no TMDLs associated with Mill Creek. The permittee eliminated Outfall 001 following the construction of Outfalls 002 and 003. Because the facility discharges to Mill Creek and no impairment or TMDL WLA is associated with Mill Creek, the WLA noted in the 2002 TMDL has not been included in the permit.

20. Regulation of Users per 9 VAC 25-31-280.B.9: N/A

21. Storm Water Management per 9 VAC 25-31-120: Application Required? ☐Yes ☑No
    The SIC Code for this facility does not fall within the categories requiring storm water special conditions.

22. Compliance Schedule per 9 VAC 25-31-250: There are no compliance schedules included in the reissued permit.

23. Variances/Alternative Limits or Conditions per 9 VAC 25-31-280.B, 100.J, 100.P, and 100.M: None

24. Financial Assurance Applicability per 9 VAC 25: N/A – This facility does not serve private residences.

25. Virginia Environmental Excellence Program (VEEP) Evaluation per § 10.1-1187.1-7: At the time of this reissuance, is this facility considered by DEQ to be a participant in the Virginia Environmental Excellence Program in good standing at either the Exemplary Environmental Enterprise (E3) level or the Extraordinary Environmental Enterprise (E4) level? ☐ Yes ☑ No

26. Nutrient Trading Regulation per 9 VAC 25-820: See Appendix C
General Permit Required: ☐ Yes ☑ No

27. Threatened and Endangered (T&E) Species Screening per 9 VAC 25-260-20 B.8: Because this is not a permit issuance or a reissuance that allows for increased discharge flows, and DCR and DGIF have not requested an opportunity to review the application, T&E screening is not required.

28. Public Notice Information per 9 VAC 25-31-280.B: All pertinent information is on file, and may be inspected and copied by contacting Eric Millard at: DEQ-Valley Regional Office, P.O. Box 3000, Harrisonburg, Virginia 22801, Telephone No. (540) 574-7813, eric.millard@deq.virginia.gov.

    Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given.

29. Historical Record:

    03/24/77 - VPDES Permit No. VA0006505 was signed this date, effective date is 03/24/77 and expiration date is 03/24/82.

    03/26/92 - VPDES Permit No. VA0006505 was signed this date, effective date is 03/30/92 and expiration date is 03/30/97.

    03/27/97 - VPDES Permit No. VA0006505 was signed this date, effective date is 03/30/97 and expiration date is 03/30/02.

    04/01/02 – VPDES General Permit No. VAG131008 coverage was issued this date, GP effective date is 03/05/98 and expiration date is 03/05/03

    3/04/03 – VPDES Permit No. VA0091243 was signed this date, effective date is 03/06/03 and the expiration date is 03/05/08.

    5/06/03 – VPDES Permit No. VA0091243 was modified on this date, to include Outfalls 002 and 003 which discharge to Mill Creek.

APPENDIX A

FACILITY AND TREATMENT WORKS DESCRIPTIONS

Existing Facility and Treatment Works

Wastewater is produced by the production of trout grown in raceways and operation of a hatchery using flowing spring water. The discharge is continuous and the quantity varies with the volume of water generated by the spring. The quality of the discharge varies depending on number and size of fish in production, amount and quality of feed provided to the fish, activities performed within the raceways (e.g., feeding, maintenance, harvesting), and ambient temperature.

The cultural station typically produces the following types, numbers, and pounds of fish annually:

Species of Fish	Pounds of Fish
Rainbow Trout	27,000
Brown Trout	11,500
Brook Trout	6,500

The culture station consists of 34 concrete raceways in series, which are approximately 8 FT wide with varying lengths based on the topography. Total length of the series of raceways is approximately 2000 FT with a vertical drop of about 100 FT. Water depth in the races average around 18" deep. Flow from one pond to the next is by wooden overflow weirs, which provide for aeration at the head of the races. Screens are installed upstream of the overflow weirs. The facility discharges to Mill Creek a short distance from the lowest raceway. Outfall 003 is located upstream of a small dam on Mill Creek, which was installed to allow recirculation of the spring water via pump during low flow periods. Outfall 002 is located downstream of the dam, and is the normal discharge point during average flow conditions.

Fish from this facility are used for seasonal stocking of Commonwealth streams, rivers, and lakes by the VDGIF. The facility does not include a slaughter operation, and the permit does not authorize the discharge of treated or untreated process wastewater to surface waters from any fish processing operation including wastewater resulting from butchering or cleaning, washing, packing and processing-related cleaning of facilities or equipment.

The permit application indicates the following chemicals are used at the facility to treat infections: Sodium Chloride (NaCl). This chemical use is addressed in the O&M Manual, and may not be discharged in amounts that are toxic to aquatic life. The discharge shall not have detectable levels of chlorine.

Domestic sewage generated at this location is treated onsite. The permit does not authorize the discharge of treated or untreated sewage to surface waters.

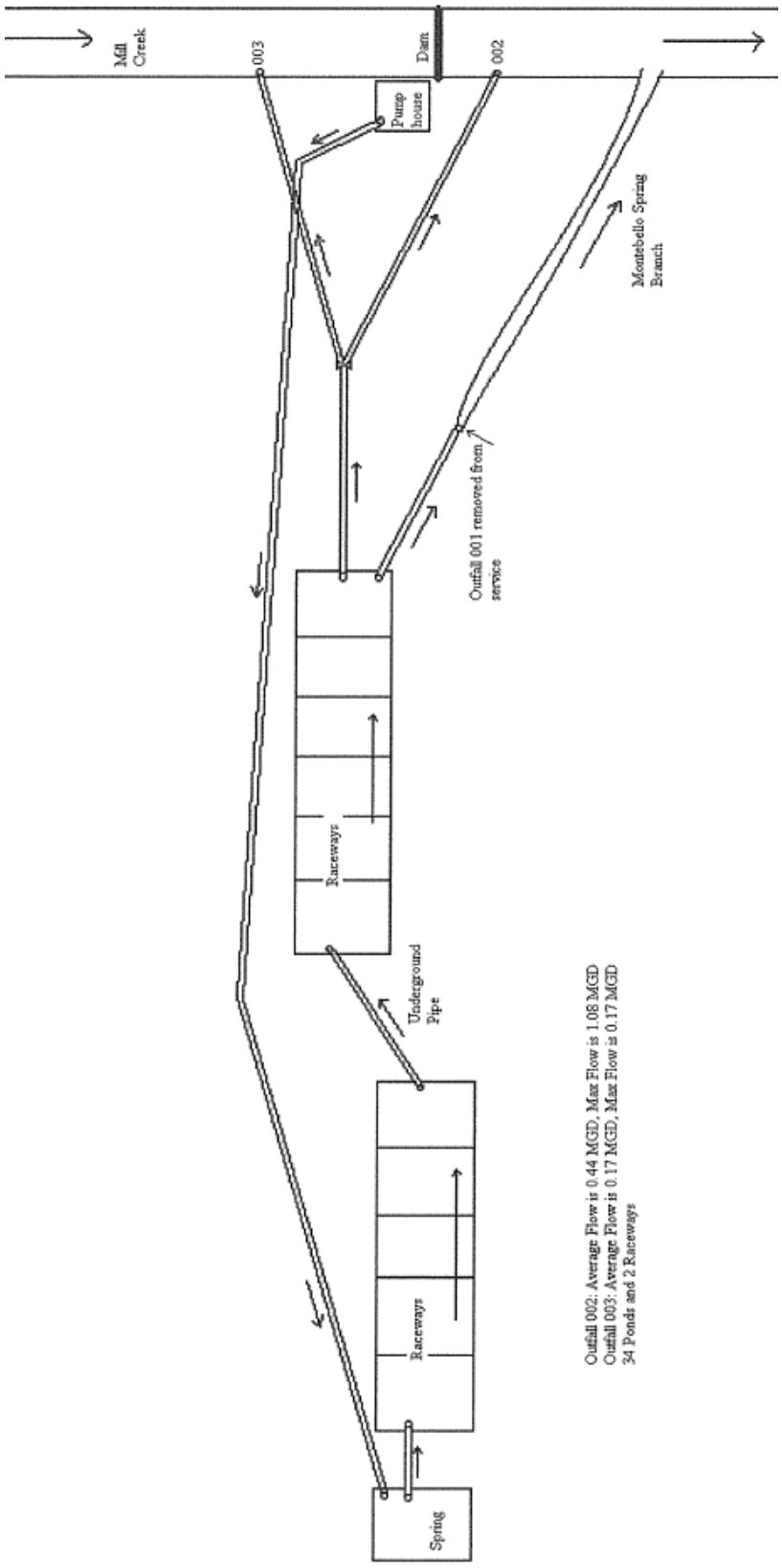
Treatment Works Description and Schematic

Solids are collected from 2 in-line 40 FT x 8 FT x 3 FT settling ponds (non-production raceways) and 22 separate quiescent zones (8 FT wide by 1.5 FT long) located between the overflow weirs and upstream screens.

Disposal of Solids

Sediment capture units are cleaned out with a 360-gallon vacuum tank. Cleaning frequency varies with the number of fish on hand, weather conditions and water flow at any given time of year. The solids are applied to private and state-owned fields used for hay production according to the SMP that is part of the approved O&M Manual.

Facility Diagram:

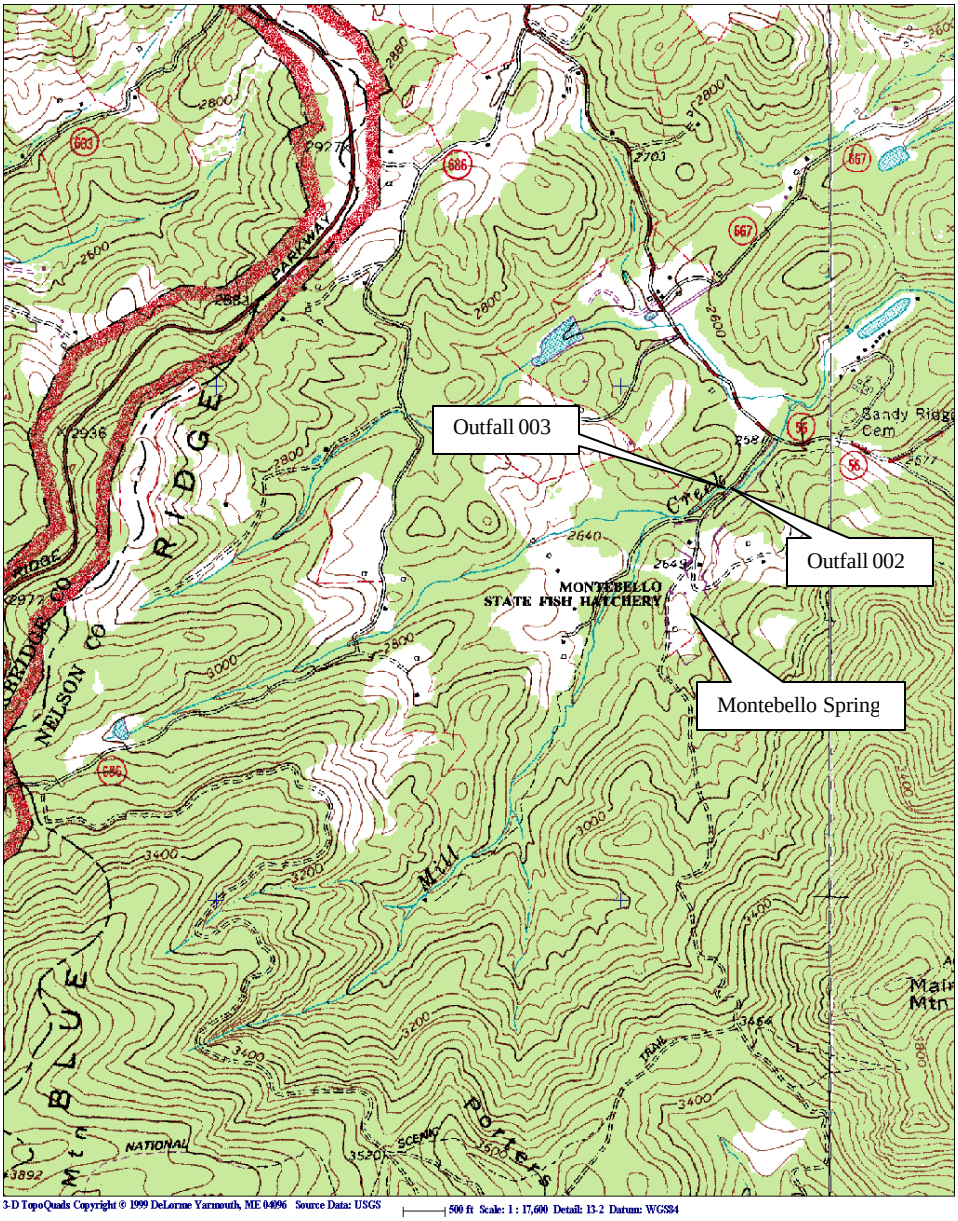


APPENDIX B

DISCHARGE LOCATION AND RECEIVING WATERS INFORMATION

This facility discharges to Mill Creek. The locations of the facility outfalls are shown on the topographic map below.

A stream flow frequency determination and mixing zone analysis are deemed unnecessary because there are no testing results for parameters for which the Board has adopted Water Quality Criteria.



PLANNING INFORMATION

Relevant points of interest within the watershed and in the vicinity of the discharge are shown on the Water Quality Assessments Review table and corresponding map below.

WATER QUALITY ASSESSMENTS REVIEW
MIDDLE JAMES RIVER BASIN
8/9/2012

IMPAIRED SEGMENTS

SEGMENT ID	STREAM	SEGMENT START	SEGMENT END	SEGMENT LENGTH	PARAMETER
H09R-01-BEN	Montebello Spring Branch	.01	0.00	.01	Benthic
H09R-01-PH	Montebello Spring Branch	.01	0.00	.01	pH

PERMITS

PERMIT	FACILITY	STREAM	RIVER MILE	LAT	LONG	WBID
VA0091243	**Montebello Fish Culture Station-002**	**Mill Creek**	**0.18**	**375051**	**0790744**	**VAV-H09R**
VA0091243	**Montebello Fish Culture Station-003**	**Mill Creek**	**0.17**	**375052**	**0790744**	**VAV-H09R**
VA0072991	Camp Blue Ridge STP	S.F. Tye River	5.37	375110	0790715	VAV-H09R

MONITORING STATIONS

STREAM	NAME	RIVER MILE	RECORD	LAT	LONG
Mill Creek	2-MIO000.35	0.35	10/18/95	375044	0790749
Mill Creek X-Trib	2-XXM000.01	0.02		375049	0790744
Unnamed Trib to Mill Creek	2-MSB000.01	0.01			

PUBLIC WATER SUPPLY INTAKES

OWNER	STREAM	RIVER MILE
None		

WATER QUALITY MANAGEMENT PLANNING REGULATION

Is this discharge addressed in the WQMP regulation? **No**

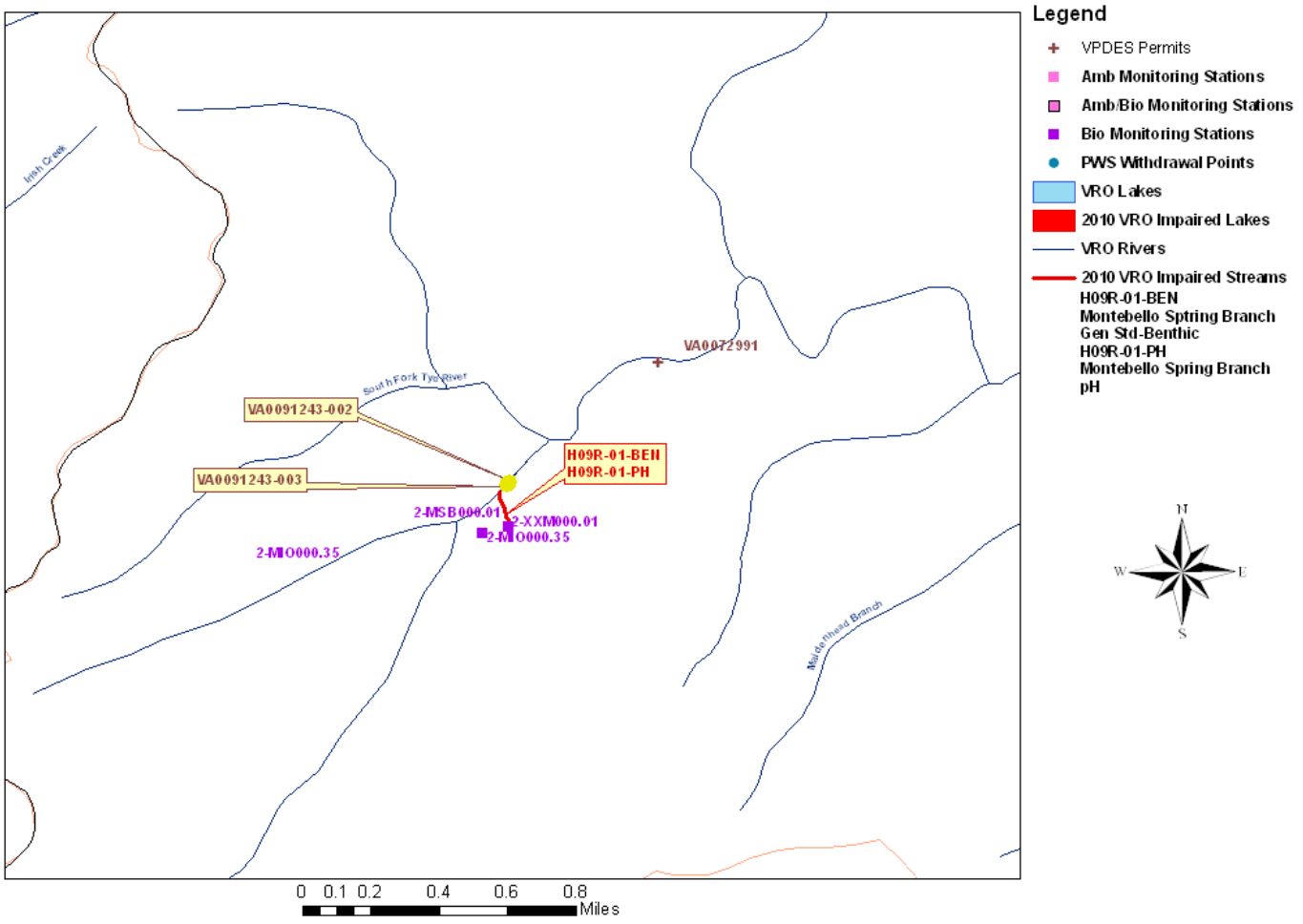
If Yes, what effluent limitations or restrictions does the WQMP regulation impose on this discharge?

PARAMETER	ALLOCATION

WATERSHED NAME

VAV-H09R Upper Tye River

Montebello Fish Cultural Station - Water Quality Assessments Review
August 9, 2012



NPDES PERMIT RATING WORKSHEET

Facilities identified under SIC 0273 – Animal Aquaculture, have the following characteristics as defined in Appendix A to the NPDES Permit Rating Work Sheet found in the VPDES Permit Manual.

1987 SIC Code Title	ELG Subcategory	ELG Subcategory Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-Category Number
0273 – Animal Aquaculture	NR	NR	1	1	99

The results of the review are detailed below. This Worksheet indicates a Score of **35** points.

Factor 1 – Toxic Pollutant Potential: 5 Points
The facility has one process waste stream; the discharge of water from the raceways. Toxicity Group number 1 corresponds to code 1, resulting in 5 points for this factor.

Factor 2 – Flow/Stream Flow Volume : 30 Points
The instream waste concentration (IWC) was previously determined in 2002 to be >50%. For Type II wastewaters, when the IWC is >50%, the resulting score for this factor is 30 points. The 2002 evaluation was deemed applicable to the current discharge and receiving stream conditions, and was carried forward at this reissuance.

Factor 3 – Conventional Pollutants: 0 Points
The permit does not contain limits for: A. Oxygen Demanding Pollutants or C. Nitrogen Pollutants. The permit does contain limits for B. Total Suspended Solids. Conventional pollutant loads are computed only when they are limited by the permit.

Factor 4 – Public Health Impact: 0 Points
Using a worst case evaluation, it is assumed that there is a pubic drinking water supply within 50 miles downstream of the facility. A human health toxicity number of 1 corresponds to code 1, resulting in 0 points for this factor.

Factor 5 – Water Quality Factors : 0 Points
There and no limitations based on water quality factors, and the receiving stream is not designated as impaired. The effluent does not exhibit a reasonable potential to violate surface water quality standards for whole effluent toxicity. 0 points are scored for this factor.

Factor 6 – Proximity to Near Coastal Waters: 0 Points
This facility was determined to have a Headquarters Priority Permit Indicator (HPRI) # of 4 because this facility is a discharger in a non-coastal county, some part of which is in an estuary drainage area, discharging into fresh non-tidal waters. A HPRI # of 4 corresponds to code 4 and a HPRI Score of 0. The Flow Code of 53 was taken from Factor 2 and corresponds to a Multiplication Factor of 0.60. The HPRI Score was multiplied by the Multiplication Factor resulting in 0 points for Section A of this factor. Because this facility does not discharge to an estuary that is listed in the National Estuary Protection (NEP) program or the Chesapeake Bay (HPRI Code 3), Section B is not applicable. Because this facility does not discharge to one of the Great Lakes Areas of Concern, Section C is not applicable. No points are scored for this factor.

NPDES PERMIT RATING WORK SHEET

[ ] Regular Addition
[ ] Discretionary Addition
[ ] Score change, but no status change
[ ] Deletion

NPDES NO. **VA0091243**

Facility Name: **Montebello Fish Culture Station**

City: **N/A**

Receiving Water: **Mill Creek**

Reach Number:

Is this facility a steam electric power plant (SIC=4911) with one or more of the following characteristics?
1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate
[ ] YES; score is 600 (stop here) [X] NO (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

[ ] YES; score is 700 (stop here)
[X] NO (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: _____ Primary SIC Code: **0273** Other SIC Codes: _____
Industrial Subcategory Code: **99** (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
[ ] No process waste streams			[ ] 3.			[ ] 7.	7	35
[X] 1.	1	5	[ ] 4.	4	20	[ ] 8.	8	40
[ ] 2.	2	10	[ ] 5.	5	25	[ ] 9.	9	45
			[ ] 6.	6	30	[ ] 10.	10	50

Code Number Checked: **1**

Total Points Factor 1: **5**

FACTOR 2: Flow/Stream Flow Volume *(Complete either Section A or Section B; check only one)*

Section A [ ] Wastewater Flow Only Considered

Wastewater Type (See Instructions)		Code	Points
Type I: Flow < 5 MGD	[ ]	11	0
Flow 5 to 10 MGD	[ ]	12	10
Flow > 10 to 50 MGD	[ ]	13	20
Flow > 50 MGD	[ ]	14	30
Type II: Flow < 1 MGD	[ ]	21	10
Flow 1 to 5 MGD	[ ]	22	20
Flow > 5 to 10 MGD	[ ]	23	30
Flow > 10 MGD	[ ]	24	50
Type III: Flow < 1 MGD	[ ]	31	0
Flow 1 to 5 MGD	[ ]	32	10
Flow > 5 to 10 MGD	[ ]	33	20
Flow > 10 MGD	[ ]	34	3

Section B [X] Wastewater and Stream Flow Considered

Wastewater Type (See Instructions)	Percent of instream Wastewater Concentration at Receiving Stream Low Flow		Code	Points
Type I/III:	< 10 %	[ ]	41	0
	10 % to < 50 %	[ ]	42	10
	> 50 %	[ ]	43	20
Type II:	< 10 %	[ ]	51	0
	10 % to <50 %	[ ]	52	20
	> 50 %	[X]	53	30

Code Checked from Section A or B: **53**

Total Points Factor 2: **30**

FACTOR 3: Conventional Pollutants

(only when limited by the permit)

A. Oxygen Demanding Pollutant: (check one) [ ] BOD [ ] COD [ ] Other: N/A

			Code	Points
Permit Limits: (check one)	[ ]	< 100 lbs/day	1	0
	[ ]	100 to 1000 lbs/day	2	5
	[ ]	> 1000 to 3000 lbs/day	3	15
	[ ]	> 3000 lbs/day	4	20

Code Checked : **N/A**

Points Scored: **N/A**

B. Total Suspended Solids (TSS)

			Code	Points
Permit Limits: (check one)	[X]	< 100 lbs/day	1	0
	[ ]	100 to 1000 lbs/day	2	5
	[ ]	> 1000 to 5000 lbs/day	3	15
	[ ]	> 5000 lbs/day	4	20

Code Checked : **1**

Points Scored: **0**

C. Nitrogen Pollutant: (check one) [ ] Ammonia [ ] Other: N/A

		Nitrogen Equivalent	Code	Points
Permit Limits: (check one)	[ ]	< 300 lbs/day	1	0
	[ ]	300 to 1000 lbs/day	2	5
	[ ]	> 1000 to 3000 lbs/day	3	15
	[ ]	> 3000 lbs/day	4	20

Code Checked : **N/A**

Points Scored: **N/A**

Total Points Factor 3: **0**

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this includes any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above referenced supply.

[X]YES (If yes, check toxicity potential number below)

[ ] NO (If no, go to Factor 5)

Determine the human health toxicity potential from Appendix A. Use the same SIC code and subcategory reference as in Factor 1. (Be sure to use the human health toxicity group column [ ] check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
[ ] No process waste streams	0	0	[ ] 3.	3	0	[ ] 7.	7	15
[X] 1.	1	0	[ ] 4.	4	0	[ ] 8.	8	20
[ ] 2.	2	0	[ ] 5.	5	5	[ ] 9.	9	25
			[ ] 6.	6	10	[ ] 10.	10	30

Code Number Checked : **1**

Total Points Factor 4: **0**

FACTOR 5: Water Quality Factors

A. Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-based federal effluent guidelines, or technology-based state effluent guidelines), or has a wasteload allocation been assigned to the discharge:

		Code	Points
[ ]	Yes	1	10
[X]	No	2	0

B. Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?

		Code	Points
[X]	Yes	1	0
[ ]	No	2	5

C. Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?

		Code	Points
[ ]	Yes	1	10
[X]	No	2	0

Code Number Checked : A 1 B 1 C 2

Total Points Factor 5: A **0** + B **0** + C **0** = **0** TOTAL

FACTOR 6: Proximity to Near Coastal Waters

A. Base Score: Enter flow code here (from Factor 2): **53**

Enter the multiplication factor that corresponds to the flow code: **0.60**

Check appropriate facility HPRI Code (from PCS):

	HPRI#	Code	HPRI Score
[ ]	1	1	20
[ ]	2	2	0
[ ]	3	3	30
[X]	4	4	0
[ ]	5	5	20

Flow Code	Multiplication Factor
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

HPRI code checked: 4

Base Score: (HPRI Score) **0** x (Multiplication Factor) **0.60** = **0** (TOTAL POINTS)

B. Additional Points --- NEP Program
For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay? **N/A**

	Code	Points
[ ] Yes	1	10
[ ] No	2	0

C. Additional Points --- Great Lakes Area of Concern
For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 areas of concern (see Instructions)? **N/A**

	Code	Points
[ ] Yes	1	10
[ ] No	2	0

Code Number Checked : A 0 B N/A C N/A

Points Factor 6: A **0** + B **N/A** + C **N/A** = **0** TOTAL

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	**5**
2	Flows/Stream Flow Volume	**30**
3	Conventional Pollutants	**0**
4	Public Health Impacts	**0**
5	Water Quality Factors	**0**
6	Proximity to Near Coastal Waters	**0**
	TOTAL (Factors 1-6)	**35**

S1. Is the total score equal to or greater than 80? [ ] Yes (Facility is a major) [X] No

S2. If the answer to the above questions is no, would you like this facility to be discretionary major?

[X] No

[ ] Yes (Add 500 points to the above score and provide reason below:

Reason: _____

New Score: **35**

Old Score: **35**

Eric Millard
Permit Reviewer's Name

540-574-7813
Phone Number

August 29, 2012
Date

APPENDIX C

EFFLUENT SCREENING AND EFFLUENT LIMITATIONS

EFFLUENT LIMITATIONS

A comparison of technology and water quality-based limits was performed and the most stringent limits were selected, as summarized in the table below.

Outfalls 002 and 003 **Final Limits** **Design Flow: 0.44 MGD**

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS		MONITORING REQUIREMENTS	
		Monthly Average	Maximum	Frequency	Sample Type
Flow (MGD)	1	NL	NL	1/Quarter	Estimate
TSS (mg/L)	2,3	10	15	1/Quarter	Composite

NL = No Limitation, monitoring required

Composite = Combination of eight or fewer hourly grab samples, collected over the duration of a normal operating day during periods of representative discharges, including discharges during fish harvesting, unit cleaning, and/or solids removal operations.

BASIS DESCRIPTIONS

1. VPDES Permit Regulation (9 VAC 25-31)
2. Best Professional Judgment (BPJ)
3. General VPDES Permit for Concentrated Aquatic Animal Production Facilities. VAG131000. Effective Date: March 5, 1998. Expiration Date: March 5, 2003.

LIMITING FACTORS – OVERVIEW:
The following potential limiting factors have been considered in developing this permit and fact sheet:

Water Quality Management Plan Regulation (WQMP) (9 VAC 25-720)	
A. TMDL limits	**None**
B. Non-TMDL WLAs	**None**
C. CBP (TN & TP) WLAs	**None**
Federal Effluent Guidelines	**None**
BPJ/Agency Guidance limits	**TSS**
Water Quality-based Limits - numeric	**None**
Water Quality-based Limits - narrative	**None**
Technology-based Limits (9 VAC 25-40-70)	**None**
Whole Effluent Toxicity (WET)	**Not applicable**
Storm Water Limits	**Not applicable**

EVALUATION OF THE EFFLUENT:
The 1998[1] Fact Sheet (FS) developed for the issuance of the General Permit for Concentrated Aquatic Animal Production Facilities documented the state-wide evaluation of the discharges authorized by individual VPDES Permits for these facilities. The FS documented the review of the available effluent data and determined that: 1) Ammonia-N, Dissolved Oxygen, BOD, Temperature, pH and Nutrients are not significant in the discharges; 2) Ammonia-N, Dissolved Oxygen, BOD, pH and Nutrients are associated with solids (controlled by TSS and SS limitations); 3) there is no evidence for Oxygen depletion due to BOD; 4) Ammonia-N was present in low concentrations and limits were not required when performing a reasonable potential analysis for toxics under worst case conditions; and 5) nutrients were at low levels consistent with the nutrient policy. This new information satisfied the exception to the antibacksliding policy and no limits for these parameters were imposed in the individual permits issued in 2003.

The 1998 FS also documents benthic surveys performed 1995-1996 that indicated impacts to the benthos in Montebello Spring Branch from solids. Technology-based effluent limits for Total Suspended Solids (TSS) and Settleable Solids (SS), with concurrent flow monitoring, were imposed in the General Permit based on Agency guidance.[2] A water quality based special condition was also imposed as a performance criterion for organic solids to ensure that the general standard is maintained.

The evaluation of possible stressors performed during the development of a TMDL[3] for streams impacted by trout farms considered potential impacts from Ammonia-N (toxic), low DO, temperature, or pH. All instream data for these parameters downstream from these facilities were consistently better than the instream WQS. Nutrients (N and P) were considered probable stressors; however, the TMDL advisory panel of experts concluded that management activities to control solids would also control excess nutrients reaching the impaired streams. Organic solids (OS) were determined to be the critical stressor to the benthic macroinvertebrate community. The TMDL established effluent loads and limitations for TSS that would provide adequate controls for OS. Effluent limitations for SS were not carried forward from the General Permit to this individual permit in 2003 because OS was considered the critical stressor in the discharge. It was documented in the 2002 Fact Sheet[4] for issuance of this permit that deleting the limits for SS based on new information qualified for the exemption to backsliding provided at 9 VAC 25-31-220.L.2.b.(1).

The facility does not meet the definition of "concentrated aquatic animal production facilities" as defined at 40 CFR 122.24[5] and Appendix C of 40 CFR Part 122[5]. The facility does not have annual production level of 100,000 pounds or more of aquatic animals, and therefore, the discharge is not subject to additional regulations under the Effluent Limitation Guideline at 40 CFR 451.[6]

The facility average flow was set at 0.44 MGD at this reissuance based on the long term 30-day average wastewater flow reported in the permit application. Flow to the facility is controlled by the Montebello Spring output, which is variable based on prevailing climatic conditions and resultant groundwater table elevation.

In the current permit reissuance application, the permittee estimates the chloride effluent concentration does not exceed 123.4 mg/L. This estimate is based on applying 400 lbs of NaCl over a 24-hr period. The expected effluent chloride concentration would therefore be 75 mg/L. Conservatively assuming a receiving stream background chloride concentration of 0 mg/L and zero flow available for mixing, the effluent concentration should not exceed 215 mg/L to ensure chloride Antidegradation requirements are met. As a condition of the current permit, the permittee was required to sample for chloride on three separate occasions when dosing the raceways with NaCl. The permittee submitted results for the required chlorides monitoring of 78.1 mg/L, 109.9 mg/L, and 12.5 mg/L. The monitoring results show that the effluent chloride concentration does not exceed 215 mg/L; therefore, no limits were included in the permit.

This permit allows the introduction of new chemicals (for example to treat food, water or the trout) upon notice to and approval by DEQ.

There are no other data to evaluate.

References:

1. Fact Sheet for Issuance of a General VPDES Permit to Discharge to State Water and State Certification under the State Water Control Law. (Effective Date: March 5, 1998. Expiration Date: March 5, 2003)

2. Guidance Memo No. 98-2004. Implementation Guidance for VPDES General Permit VAG131000, Concentrated Aquatic Animal Production Facilities.

3. Benthic TMDL Reports for Six Impaired Stream Segments in the Potomac-Shenandoah and James River Basins. Submitted by Virginia Department of Environmental Quality and Virginia Department of Conservation and Recreation. Prepared by The Virginia Water Resources Research Center, Virginia Tech. April 29, 2002.

4. Fact Sheet for Issuance of VPDES Permit No. VA0091251 drafted by Brandon D. Kiracofe on November 20, 2002, with modification on February 23, 2005.

5. 40 CFR Part 122 – EPA Administered Permit Programs: The National Pollutant Discharge Elimination System, 40 CFR Part 122.24 – Concentrated aquatic animal production facilities (applicable to State NPDES programs, Appendix C to 40 CFR Part 122 – Criteria for Determining a Concentrated Aquatic Animal Production Facility.

6. 40 CFR Part 451 – Concentrated Aquatic Animal Production Point Source Category, Subpart A-Flow-Through and Recirculating Systems Subcategory

APPENDIX D

BASES FOR PERMIT SPECIAL CONDITIONS

Tabulated below are the sections of the permit, with any changes and the reasons for the changes identified. Also provided is the basis for each of the permit special conditions.

Cover Page
- Content and format as prescribed by the VPDES Permit Manual.

Part I.A.1. **Effluent Limitations and Monitoring Requirements:**
Updates Part I.A.1. of the previous permit with the following:
- Changes were made to the format and introductory language.

Part I.B. **Effluent Limitations and Monitoring Requirements – Additional Instructions:** *Updates Part I.B. of the previous permit*. Authorized by VPDES Permit Regulation, 9 VAC 25-31-190.J.4 and 220.I. This condition is necessary when a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.

Part I.C.1. **Materials Handling/Storage:** *Identical to Part I.C.1. of the previous permit.* 9 VAC 25-31-280.B.2. requires that the types and quantities of "wastes, fluids, or pollutants which are … treated, stored, etc." be addressed for all permitted facilities.

Part I.C.2 **O&M Manual Requirement:** *Updates Part I.C.2. of the previous permit.* Required by Code of Virginia 62.1-44.19, SCAT Regulations 9 VAC 25-790, and VPDES Permit Regulation 9 VAC 25-31-190 E for all STPs.

Part I.C.3. **Reopeners:**
a. *New Requirement*: Section 303(d) of the Clean Water Act requires that total maximum daily loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The reopener recognizes that, according to section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act.
b. *Updates Part I.C.3. of the previous permit:* 9 VAC 25-40-70 A authorizes DEQ to include technology-based annual concentration limits in the permits of facilities that have installed nutrient control equipment, whether by new construction, expansion or upgrade.

Part I.C.4. **Notification Levels:** *Identical to Part I.C.4. of the previous permit.* Required by the VPDES Permit Regulation 9 VAC 25-31-200 A for all manufacturing, commercial, mining, and silvicultural dischargers.

Part I.C.5. *Identical to Part I.C.5. of the previous permit.* Prohibits the discharge of sewage and is required since sewage wastewater discharges were not evaluated for limits under this permit.

Part I.C.6. *Identical to Part I.C.6. of the previous permit.* Prohibits the discharge of fish processing wastewater and is required since fish processing wastewater discharges were not evaluated for limits under this permit.

Part I.C.7. *Identical to Part I.C.7. of the previous permit.* Prohibits discharges containing unapproved chemicals, toxic chemicals, or chlorine and is required since those parameters were not evaluated for limits under this permit. DEQ shall have the opportunity to review and approve the use of all chemicals used in the production operation through the O&M Manual review and approval process.

Part I.C.8. *Identical to Part I.C.8. of the previous permit.* The prohibition of the discharge of excess organic solids is based on the narrative section of the WQS regulation.

Part II **Conditions Applicable to All VPDES Permits:** *Identical to Part II of previous permit.* VPDES Permit Regulation 9 VAC 25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed. Part II,A.4. language added for Virginia Environmental Laboratory Accreditation Program (VELAP) per 1 VAC 30, Chapter 45: Certification for Noncommercial Environmental Laboratories, and 1 VAC 30, Chapter 46: Accreditation for Commercial Laboratories.

DELETIONS

Tabulated below are the sections of the previous permit that were deleted and the basis for this action.

Part I.C.3.a. Nutrient concentration limits reopener: Removed at this reissuance because this facility is not expected to contribute a significant amount of nutrients to the receiving stream nor install nutrient removal technology.

Part I.C.9. Water Quality Monitoring: Removed at this reissuance because the facility submitted the required monitoring results.